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3/27/97

S. C. PUBLIC SERVICE COMMISSION

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DIRECT TESTIMONY

OF

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UTILITIES DEPARTMENT

NEVILLE O. LORICK

ON BEHALF OF

SOUTH CAROLINA ELECTRIC & GAS COMPANY

DOCKET NO. 97-004-E

APRIL 23, 1997

RETURN DATE:  
SERVICE: *OK*

**DIRECT TESTIMONY**  
**OF**  
**NEVILLE O. LORICK**  
**ON BEHALF OF**  
**SOUTH CAROLINA ELECTRIC & GAS COMPANY**  
**DOCKET NO. 97-004-E**

1   **Q.   PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION**  
2       **WITH SOUTH CAROLINA ELECTRIC AND GAS COMPANY**  
3       **(SCE&G).**

4   **A.**Neville Lorick, 1426 Main Street, Columbia, South Carolina. I am  
5       employed by SCE&G as Vice President of Fossil & Hydro Operations.

6   **Q.   PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**  
7       **PROFESSIONAL EXPERIENCE.**

8   **A.**I have a B. S. in Mechanical Engineering from the University of South  
9       Carolina. I was employed by SCE&G in April, 1971, as a Student Assistant and  
10      was hired full time in January, 1975, as an Engineer. In March, 1978, I became  
11      the Assistant Plant Manager for our Canadys Station Fossil Steam Plant and in  
12      September, 1982, was promoted to Plant Manager. In July, 1988, I was  
13      promoted to General Manager, Fossil and Production Operations. In this  
14      position, I was responsible for all the Fossil Plants and the Fossil Production

1 Corporate Staff. In December, 1992, with reorganization, my title was changed  
2 to Manager of Production Support. In December, 1994, I was named Manager of  
3 Operation Services and my responsibilities were the Support Staff and their  
4 interface with the Fossil/Hydro Departments. In July, 1995, I was promoted to  
5 Vice President of Fossil & Hydro Operations.

6 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

7 **A.** The purpose of my testimony is to review the operating performance of  
8 South Carolina Electric & Gas Company's fossil units and GENCO's Williams  
9 Station during the period March 1, 1996, through February 28, 1997.

10 **Q. PLEASE SUMMARIZE THE PERFORMANCE OF THE FOSSIL UNITS.**

11 **A.** Overall, our fossil units have had a successful operating history in the (12)  
12 months period ending on February 28, 1997.

13 For the period March 1, 1996, through February 28, 1997, the availability  
14 for all fossil plants was 83.78%.

15 Availability is a measure of actual hours that generation units are available  
16 compared with the total hours in the period under consideration. Availability is a  
17 good indication of overall unit performance by a given plant since it is not  
18 affected by how the unit is dispatched or by the demand from the system. NERC  
19 averages from 1991 to 1995 for availability from similar sized pulverized coal  
20 fired units were 85.29%.

21 During this period, our fossil plants generated 13,976.0 million megawatt  
22 hours of energy which is 70.57% of the total generated by the system. The

1 balance of 24.18% being nuclear and 4.89% being hydro and gas turbine.

2 We remain aware that capacity factors and availability are functions of  
3 many conditions and circumstances, many of which are beyond the Company's  
4 control.

5 Consequently, national average figures should be used with caution and  
6 should not be established as final benchmarks against which to measure precisely  
7 the reasonableness of the performance of our units.

8 **Q. COULD YOU DISCUSS SCE&G'S FORCED OUTAGE RATE FOR THE**  
9 **PERIOD UNDER REVIEW.**

10 **A.** Forced outage rate is the percentage of the total hours that generating units  
11 are forced out of service for various reasons compared with the total hours in  
12 service and hours forced out during the period considered. SCE&G's system  
13 forced outage rate for March 1, 1996, through February 28, 1997, was 1.95%.  
14 That is compared to NERC national average forced outage rate of 4.93% for  
15 similar sized units. We did experience boiler tube failures at our steam  
16 generating stations which did impact our availability and forced outage rates.  
17 These unavoidable equipment failures did not prevent us from achieving a very  
18 favorable operating record for the period. During the Spring of 1996, Urquhart  
19 Station's Unit 2 underwent a major controls upgrade to a Westinghouse WDPF  
20 digital control system. This outage also included a HP and LP turbine overhaul.  
21 During the Fall of 1996, a similar control conversion was accomplished on  
22 Urquhart Station's Unit #1. Canadays Station's Unit #3 completed Low Nox  
23 burner installation and HP/LP turbine overhaul in December 1996. McMeekin

1 Station, during a 1996 Fall outage, rewound the high pressure generator on Unit  
2 #1.

3 **Q. WHAT HAS BEEN THE HEAT RATE OF THE FOSSIL UNITS DURING**  
4 **THE REVIEW PERIOD?**

5 **A.** Heat Rate is a way to measure the thermal efficiency of a power plant fuel  
6 cycle. It is the number of BTU's of fuel required to generate one (1) kilowatt  
7 hour of generation.

8 For the period March 1, 1996, through February 28, 1997, the overall heat  
9 rate for Fossil Plants in the SCE&G's system was 9812 BTU/KwHr. McMeekin  
10 Station was our most efficient plant posting an overall 9600 BTU/KwHr. heat  
11 rate for the period. These are quite good heat rates for these plants and indicate  
12 highly efficient operations which means low coal consumption and reduced cost  
13 for our customers. During the period we reached a Summer peak of 3698 MW's  
14 for our system on July 23, 1996, at 6:00 p.m. Power for this peak was produced  
15 by the use of our plants which include steam, nuclear, hydro and gas turbines.

16 **Q. IN OPERATING ITS FOSSIL AND HYDRO PLANTS, HAS SCE&G**  
17 **TAKEN ALL REASONABLE STEPS TO MINIMIZE ITS FUEL COST**  
18 **TO CUSTOMERS?**

19 **A.** Yes. We have operated these plants as efficiently and reliably as is  
20 reasonably possible. By doing so, we have held our customers' costs, including  
21 fuel costs, to a minimum.

22 We are fortunate that we have had a low forced outage rate and a very low  
23 heat rate during this period. But such favorable results will not always be

1 possible. Even with every reasonable effort by the Company to prevent them,  
2 equipment problems and human error will cause outages and availability  
3 problems from time to time.

4 The Company will continue to make every reasonable effort to minimize  
5 operating problems. But such problems are a normal part of utility operations  
6 and are to be expected from time to time. We are very proud of the results we  
7 have achieved during the current period but recognize that in the normal course  
8 of utility operation, there will be periods where results such as these cannot be  
9 reached.

10 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

11 **A.** Yes.